

Expenditures on Children by Families, 2003

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This article presents the 2003 estimates of expenditures on children by husband-wife and single-parent families. Data and methods used in calculating annual child-rearing expenses are described. Estimates are provided by budgetary component, age of the child, family income, and region of residence. For the overall United States, estimates of child-rearing expenses ranged between \$9,510 and \$10,560 for a child in a two-child, husband-wife family in the middle-income group.

Child rearing is a costly endeavor. Since 1960, the U.S. Department of Agriculture (USDA) has provided annual estimates of family expenditures on children from their birth through age 17. USDA's annual child-rearing expense estimates are used in four major ways:

- **To determine State child support guidelines.** The economic well-being of millions of children is affected by child support. Under the Family Support Act of 1988, States are required to have numeric child support guidelines and to consider the economic costs of raising a child when establishing these guidelines.
- **To determine State foster care payments.** Many States use the estimates to determine how much to reimburse people with foster children. In 2001, about 542,000 children were in foster care (U.S. Department of Health and Human Services, 2003).
- **To appraise damages arising from personal injury or wrongful death cases.** For example, if a person with children is hurt on a job such that he or she cannot work, the courts use the child-rearing expense figures to determine compensation for the family.

- **To educate anyone who is considering when or whether to have children.** Knowing how much it costs to raise a child until that child reaches the age of maturity may encourage teens to wait until adulthood and be more prepared financially to have children.

USDA Method for Estimating Expenditures on Children by Families¹

USDA provides annual estimates of expenditures on children from their birth through age 17. These expenditures on children, by husband-wife and single-parent families, are estimated for the major budgetary components: housing, food, transportation, clothing, health care, child care/education, and miscellaneous goods and services (see box).

¹*Expenditures on Children by Families, 2003* provides a more detailed description of the data and methods. To obtain a copy, go to <http://www.cnpp.usda.gov> or contact USDA, Center for Nutrition Policy and Promotion, 3101 Park Center Drive, Room 1034, Alexandria, VA 22302 (voice: 703-305-7600).

The most recently calculated child-rearing expenses are based on 1990-92 Consumer Expenditure Survey (CE) data, which are updated to 2003 dollars by using the Consumer Price Index (CPI). The CE, administered by the Bureau of Labor Statistics, U.S. Department of Labor, is the only Federal survey of household expenditures collected nationwide. It contains information on sociodemographic characteristics, income, and expenditures of a nationally representative sample of households. The sample used to determine child-rearing expenses consisted of 12,850 husband-wife and 3,395 single-parent households, weighted to reflect the U.S. population of interest.

In determining child-rearing expenses, USDA examines the intrahousehold distribution of expenditures by using data for each budgetary component.

In the CE, the data on these budgetary components are child specific (clothing, child care, and education) and household specific (housing, food, transportation, health care, and miscellaneous goods and services). Multivariate analysis, used to estimate household- and child-specific expenditures, controlled for income level, family size, age of the child, and region of residence (when appropriate) so that expenses could be determined for families with these varying characteristics.

Estimates of child-rearing expenses are provided for three income levels, which were determined by dividing the sample of husband-wife families in the overall United States into equal thirds. For each income level, the estimates are for the younger child in families with two children. These younger children were grouped in one of six age categories: 0-2, 3-5, 6-8, 9-11,

12-14, or 15-17. Households with two children were selected as the standard because this was the average household size in 1990-92. The focus is on the younger child because the older child may be over age 17.

Child-rearing estimates provided by the USDA are based on CE interviews of households with and without specific expenses. For some families, expenditures may be higher or lower than the mean estimates, depending on whether or not they incur a particular expense. Calculation of child care and education expenditures are examples, because about 50 percent of husband-wife families in the study spent no money on these goods and services. Also, the estimates cover only out-of-pocket expenditures on children made by the parents and not by others, such as grandparents or friends.

Categories of Household Expenditures

Housing expenses: shelter (mortgage interest, property taxes, or rent; maintenance and repairs; and insurance), utilities (gas, electricity, fuel, telephone, and water), and house furnishings and equipment (furniture, floor coverings, and major and small appliances). For homeowners, housing expenses do not include mortgage principal payments; in the data set used, such payments are considered to be part of savings.

Food expenses: food and nonalcoholic beverages purchased at grocery, convenience, and specialty stores, including purchases with food stamps; dining at restaurants; and household expenditures on school meals.

Transportation expenses: the net outlay on the purchase of new and used vehicles, vehicle finance charges, gasoline and motor oil, maintenance and repairs, insurance, and public transportation.

Clothing expenses: children's apparel such as diapers, shirts, pants, dresses, and suits; footwear; and clothing services such as dry cleaning, alterations and repair, and storage.

Health care expenses: medical and dental services not covered by insurance, prescription drugs and medical supplies not covered by insurance, and health insurance premiums not paid by the employer or other organizations.

Child care and education expenses: daycare tuition and supplies; babysitting; and elementary and high school tuition, books, and supplies.

Miscellaneous expenses: personal care items, entertainment, and reading materials.

After estimating the various overall household and child-specific expenditures, USDA allocated these total amounts among family members (i.e., in a married-couple, two-child family, the total amounts were allocated to the husband, wife, older child, and younger child). Because the expenditures for clothing, child care, and education are child specific—and apply only to children—allocations of these expenses were made by dividing them equally among the children. The CE does not collect child-specific expenditures on food and health care. Thus, to apportion these budgetary components to a child based on his or her age, USDA used data from other Federal studies, which show the shares of the household budget spent on children's food and health care.

Unlike what is the case for food and health care, no authoritative source exists for allocating among family members the amount the household spends on housing, transportation, and other miscellaneous goods and services. The marginal cost and the per capita methods are, however, two common approaches used to allocate these expenses.

The marginal cost method measures expenditures on children as the difference in expenses between couples with children and equivalent childless couples. Various equivalency measures, yielding very different estimates of expenditures on children, have been proposed, but no standard measure has been accepted by economists. Also, the marginal cost approach assumes that the difference in total expenditures between couples with and without children can be attributed solely to the presence of children in a family. This assumption is questionable, especially because couples without children often buy homes larger than they need in anticipation of having children. Comparing the expenditures

of these couples with those of similar couples with children could lead to underestimating how much is spent on meeting the lifetime needs—and wants—of children.

For these reasons, USDA uses the per capita method to allocate expenses on housing, transportation, and miscellaneous goods and services in equal proportions among household members. Although the per capita method has its limitations, they are considered less severe than those of the marginal cost approach.

Because transportation expenses resulting from work activities are not related directly to the cost of raising a child, these expenses were excluded when determining children's transportation expenses.

Expenditures on Children by Husband-Wife Families

Child-Rearing Expenses and Household Income Are Positively Associated

In 2003, estimated average expenses on children increased as income level rose (fig. 1). Depending on the age of the child, the annual expenses ranged from \$6,820 to \$7,840 for families in the lowest income group, from \$9,510 to \$10,560 for families in the middle-income group, and from \$14,140 to \$15,350 for families in the highest income group. The before-tax income in 2003 for the lowest income group was less than \$40,700, between \$40,700 and \$68,400 for the middle-income group, and more than \$68,400 for the highest income group.

On average, households in the lowest income group spent 28 percent of their before-tax income per year on a child; those in the middle-income group, 18 percent; and those in the highest

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group, 14 percent. The range in these percentages would be narrower if after-tax income were considered, because a greater percentage of income in higher income households goes toward taxes.

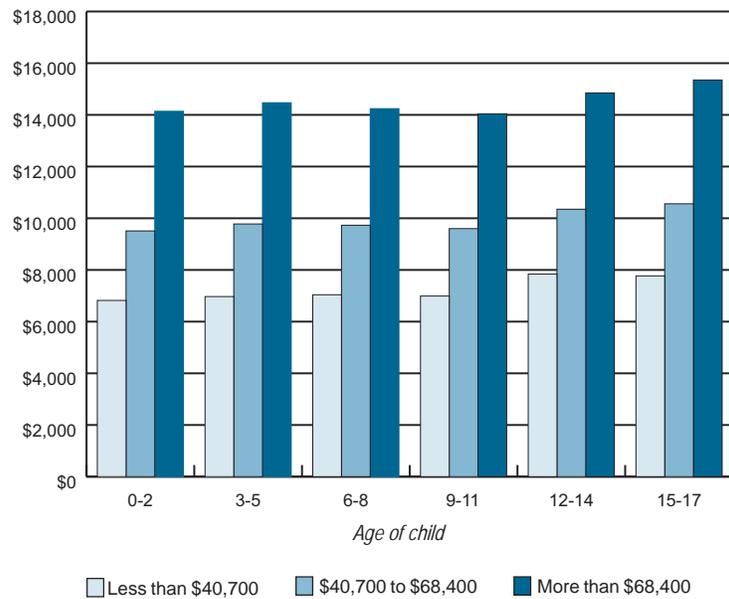
On average, the amount spent on children by families in the highest income group was about twice the amount spent by families in the lowest income group. This amount varied by budgetary component. In general, expenses on a child for goods and services considered to be necessities (e.g., food and clothing) did not vary as much as those considered to be discretionary (e.g., miscellaneous expenses) among households in the three income groups.

Housing Is the Largest Expense on a Child

Housing accounted for the largest share of total child-rearing expenses. (Figure 2 demonstrates this for middle-income families.) Based on expenses incurred among all age groups, housing accounted for 32 percent of child-rearing expenses for a child in the lowest income group, 34 percent in the middle-income group, and 37 percent in the highest income group. Food, the second largest average expense on a child for families—regardless of income level—accounted for 20 percent of child-rearing expenses in the lowest income group, 17 percent in the middle-income group, and 15 percent in the highest income group. Transportation was the third largest child-rearing expense across income levels, averaging 13 to 14 percent.

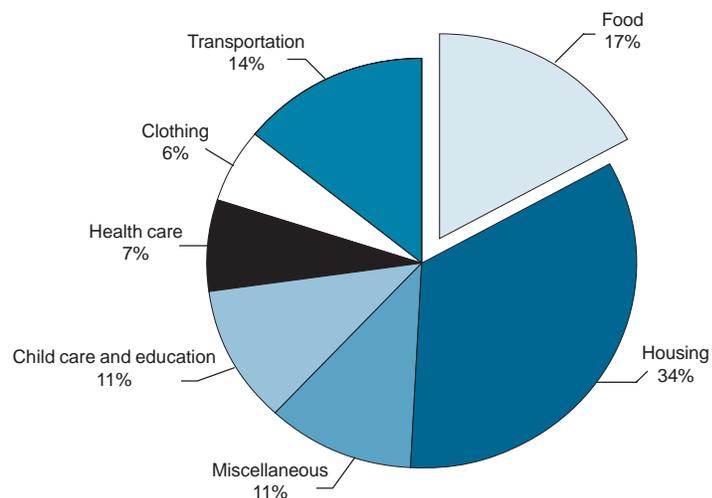
Across the three income groups, miscellaneous goods and services (personal care items, entertainment, and reading materials) was generally the fourth largest expense on a child for families, 10 to 12 percent. Clothing (excluding gifts or hand-me-downs) accounted for 5 to 7 percent of expenses on a child for families; child

Figure 1. Family expenditures on a child, by income level and age of child,¹ 2003



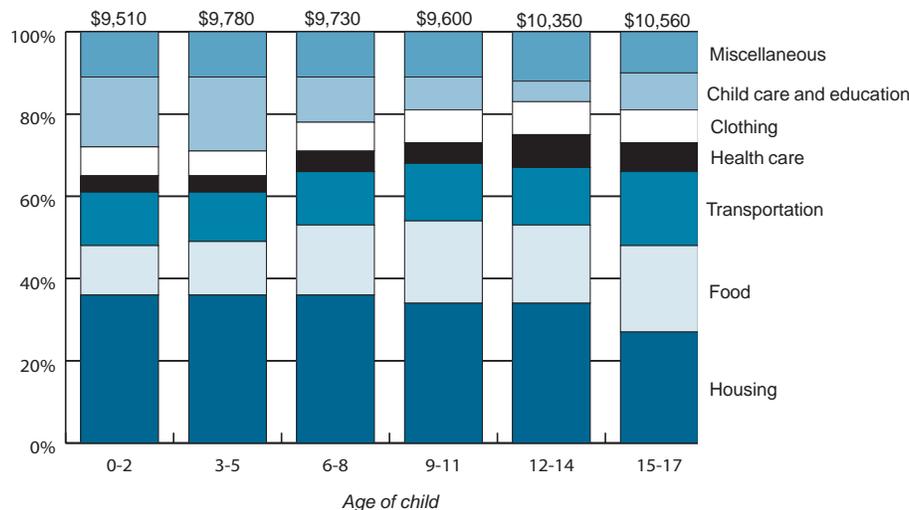
¹U.S. average for the younger child in husband-wife families with two children.

Figure 2. Expenditure shares on a child from birth through age 17 as a percentage of total child-rearing expenditures,¹ 2003



¹U.S. average for the younger child in middle-income, husband-wife families with two children.

Figure 3. Total expenses and expenditure shares on a child (as a percentage of total child-rearing expenditures), by age of child,¹ 2003



¹U.S. average for the younger child in middle-income, husband-wife families with two children.

care and education, 9 to 12 percent; and health care, 6 to 8 percent. Estimated expenditures for health care consisted of out-of-pocket expenses only (including insurance premiums not paid by an employer or other organizations) and not that portion covered by health insurance.

Expenses Increase as a Child Gets Older

Expenditures on a child were generally lower in the younger age categories and higher in the older age categories. (Figure 3 depicts this for families in the middle-income group.) This relationship held across income groups even though housing expenses, the highest child-rearing expenditure, generally declined as a child grew older. The decline in housing expenses reflects diminishing interest paid by homeowners over the life of a mortgage. Payments on principal are not considered part of housing costs in the CE; they are deemed to be a part of savings.

For all three income groups, food, transportation, clothing, and health

care expenses related to child-rearing generally increased as the child grew older. Transportation expenses were highest for a child age 15-17, when he or she would start driving. Child care and education expenses were highest for a child under age 6. Most of this expense may be attributed to child care at this age. The estimated expense for child care and education may seem low for those with the expenses, because these estimates reflect the average by households with *and* without the expense.

Child-Rearing Expenses Are Highest in the Urban West

Child-rearing expenses in the regions of the country reflect patterns observed in the overall United States; in each region, expenses on a child increased with household income level and, generally, with the age of the child. (Figure 4 shows total child-rearing expenses by region and age of a child for middle-income families.) Overall, child-rearing expenses were highest in the urban West, followed by the urban Northeast and urban South. Child-

rearing expenses were lowest in the urban Midwest and rural areas. Much of the regional difference in expenses on a child was related to housing costs. Total housing expenses on a child were highest in the urban West and urban Northeast and lowest in rural areas. However, child-rearing transportation expenses were highest for families in rural areas. This likely reflects the longer traveling distances and the lack of public transportation in these areas.

Older Children and the “Cheaper-by-the-Dozen” Effect

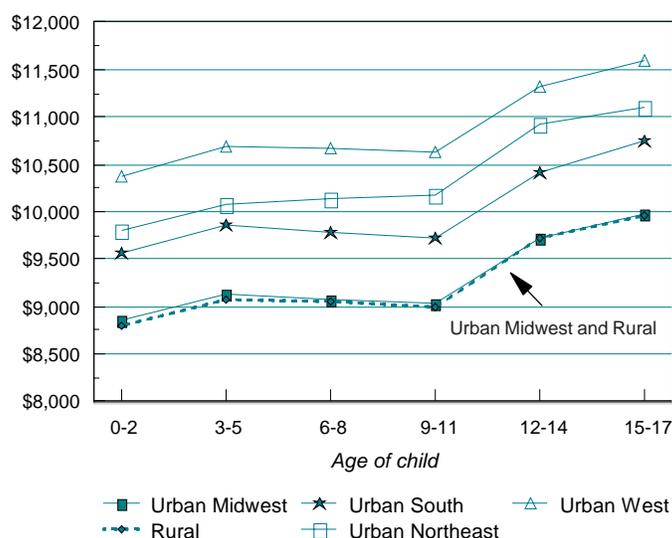
The expense estimates on a child represent expenditures on the younger child, at various ages, who is one of two children in a husband-wife household. We cannot assume that expenses on the older child are the same at these various ages. The method for estimating expenses on the younger child was essentially repeated to determine whether expenses vary by birth order. The focus was on the older child in each of the same age categories as those used with the younger child. A two-child family was again used as the standard.

On average, for husband-wife households with two children, expenditures did not vary by birth order. Thus, annual expenditures on children in a husband-wife, two-child family may be estimated by summing the expenses for the appropriate age categories (fig. 1).

Although expenses on children did not vary by birth order, they did differ when a household had only one child or more than two children. Depending on the number of other children in the household, families spent more or less on a child—achieving a “cheaper-by-the-dozen” effect as they had more children.

The method to estimate child-rearing expenses was repeated for families

Figure 4. Family expenditures on a child, by region and age of child,¹ 2003



¹Regional averages for the younger child in middle-income, husband-wife families with two children.

with one child and families with three or more children. Compared with expenditures for each child in a husband-wife family with two children, expenditures in a husband-wife household with one child averaged 24 percent more on the single child; expenditures for those with three or more children averaged 23 percent less on each child. Hence, family income is spread over fewer or more children, subject to economies of scale. As families have more children, the children can share a bedroom, clothing and toys can be handed down to younger children, and food can be purchased in larger and more economical packages.

Expenditures on Children by Single-Parent Families

The estimates of expenditures on children by husband-wife families do not apply to single-parent families, a group that accounts for an increasing percentage of families with children. Therefore, for the overall United

States, USDA calculated separate estimates of child-rearing expenses in single-parent households. CE data were used to do so. Most single-parent families in the survey were headed by a woman (90 percent). The method previously described was followed; however, regional estimates were not calculated for single-parent families because of limitations in the sample size.

Estimates cover only out-of-pocket child-rearing expenditures made by the single parent with primary care of the child and do not include child-related expenditures made by the parent without primary care or expenditures made by others, such as grandparents. The data did not contain this information. Overall expenses by both parents on a child in a single-parent household are likely greater than the USDA’s estimates of child-rearing expenses.

Table 1 presents estimated expenditures on the younger child in a single-parent family with two children, compared with those of the younger child in a

Table 1. Family expenditures on a child, by lower income single-parent and husband-wife households,¹ 2003

Age of child	Single-parent households	Husband-wife households
0 - 2	\$5,700	\$6,820
3 - 5	6,440	6,970
6 - 8	7,230	7,040
9 - 11	6,710	6,990
12 - 14	7,210	7,840
15 - 17	7,960	7,770
Total (0 - 17)	\$123,750	\$130,290

¹Estimates are for the younger child in two-child families in the overall United States.

husband-wife family with two children. Each family type was in the lower income group, having before-tax income less than \$40,700. About 83 percent of single-parent families and 33 percent of husband-wife families were in this lower income group. More single-parent than husband-wife families, however, were in the bottom range of this income group and had an average income of \$17,000, compared with \$25,400 for husband-wife families. Although average income varied for these lower income families, total expenditures on a child through age 17 were, on average, only 5 percent lower in single-parent households than in two-parent households.

Single-parent families in this lower income group, therefore, spent a larger proportion of their income on children than did their counterpart two-parent families. On average, housing expenses were higher for single-parent families than for two-parent families; whereas, transportation, health care, child care and education, and miscellaneous expenditures on a child were lower in single-parent than in husband-wife households. Child-related food and clothing expenditures were similar, on average, for both family types.

For the higher income group of single-parent families with 2003 before-tax income of \$40,700 and over,² estimates of child-rearing expenses were about the same as those for two-parent households in the before-tax income group of \$68,400 and over. In 2003 dollars, total expenses for the younger child through age 17 were \$261,750 for single-parent families versus \$261,270 for husband-wife families. Child-rearing expenses for the higher income group of single-parent families, therefore, were also a larger proportion of income than was the case for husband-wife families. Thus, expenditures on children do not differ much between single-parent and husband-wife households; what differs is household income level. Because single-parent families have one less potential earner than do husband-wife families, on average, their total household income is lower and child-rearing expenses as a percentage of income are greater.

The same procedure was used to estimate child-rearing expenses on an older child in single-parent households as well as by household size.

²The two higher income groups were combined for single-parent families.

On average, single-parent households with two children spent 7 percent less on the older child than on the younger child (regardless of age-related differences). This contrasts with husband-wife households whose expenditures on children were unaffected by the children's birth order.

As with husband-wife households, single-parent households spent more or less if there was either one child or three or more children. Compared with expenditures for the younger child in a single-parent household with two children, expenditures for an only child in a single-parent household averaged 35 percent more; single-parent households with three or more children averaged 28 percent less on each child.

Other Expenditures on Children

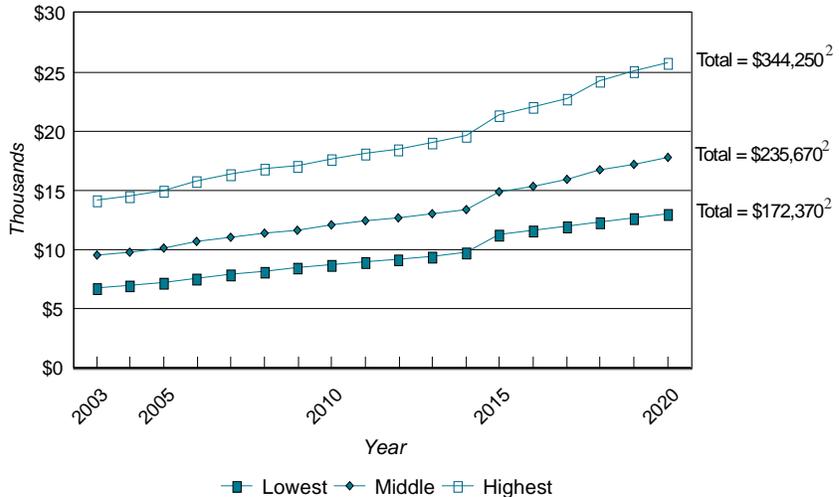
The USDA child-rearing expense estimates consist of direct expenses made by parents on children through age 17 for seven major budgetary components. The expenses exclude costs related to childbirth and prenatal health care and other expenditures, especially those incurred after a child turns age 18.

One of the largest expenses made on children after age 17 is that of a college education. The College Board estimated that in 2003-2004, annual average tuition and fees were \$4,454 at 4-year public colleges and \$17,040 at 4-year private colleges; annual room and board was \$5,475 at 4-year public colleges and \$6,403 at 4-year private colleges (The College Board, 2003). Other parental expenses on children after age 17 could include those associated with children living at home or, if children do not live at home, gifts and other contributions to them. A study by Schoeni and Ross

Child-Rearing Expenses Over Time

The estimates presented in this article represent household expenditures on a child of a certain age in 2003. Future price changes need to be incorporated to estimate these expenses over time. Thus, a future cost formula was used, and the results are presented in this graph. The estimated future expenditures are on the younger child in a husband-wife family with two children. The assumptions are that a child is born in 2003 and reaches age 17 in 2020 and that the average annual inflation rate over this time is 3.1 percent (the average annual inflation rate over the past 20 years). The result: total family expenses on a child through age 17 would be \$172,370 for households in the lowest income group, \$235,670 for those in the middle, and \$344,250 for those in the highest income group.

Estimated annual expenditures on a child born in 2003, by income group, overall United States¹



¹Estimates are for the younger child in husband-wife families with two children.

²Total reflects expenses on a child through age 17.

(2003) found that parents contribute, on average, \$2,200 annually (in 2001 dollars) to children ages 18 to 34.

USDA's estimates do not include all governmental expenditures on children, such as public education, Medicaid, and subsidized school meals. Actual expenditures on children (by parents and the government), therefore, would be higher than reported here. The indirect costs of raising children—time allocated to child rearing and decreased earnings—are not included in the estimates. Although these costs are more difficult to measure than direct expenditures, they can be as high, if not higher than, the direct costs of raising children (Spalter-Roth & Hartmann, 1990; Bryant, Zick, & Kim, 1992; Ireland & Ward, 1995).

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